COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Valley Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Transprint USA
Harrisonburg, Virginia
Permit No. VRO80926

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Transprint USA has applied for a renewal of its Title V Operating Permit for its Harrisonburg rotogravure printing and chromium electroplating facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____ Date: 01/04/05

Air Permit Manager:_____ Date: 01/31/05

Regional Permit Manager:_____ Date: 01/31/05

FACILITY INFORMATION

Permittee
Transprint USA
1000 Pleasant Valley Road
Harrisonburg, Virginia 22801

Facility
Transprint USA
1000 Pleasant Valley Road
Harrisonburg, Virginia

Plant ID No. 51-165-0106

SOURCE DESCRIPTION

NAICS Codes:

323111 (formerly SIC Code: 2754) – Commercial gravure printing
332813 (formerly SIC Code 3471) - Electroplating, plating, polishing, anodizing, and coloring
323122 (formerly SIC Code 2796) – Prepress services
32591 (formerly SIC Code 2893) – Printing ink manufacturing

Transprint USA (Transprint) is a product rotogravure printing facility located in Harrisonburg, Virginia. The plant prints designs on paper for transfer to other media used in the textile and home products industries. The printing operations are supported by hard chromium electroplating which is used to make the rotogravure printing cylinders. A small amount of silver, copper, and nickel electroplating is conducted, as well as polishing and engraving of the cylinders. The facility also produces release inks for use on-site in its printing operations. Volatile organic compound (VOC) emissions are generated by the rotogravure printing operations and the ink production process, while hexavalent chromium emissions result from the electroplating facility.

The facility is a Title V major source of VOC and HAPs (methyl ethyl ketone, methyl isobutyl ketone, methanol, and toluene). This source is located in an attainment area for all pollutants, and is a PSD synthetic minor source. The facility was previously permitted under Minor NSR Permits issued on March 31, 2003 and October 20, 2004**.** Transprint is subject to 40 CFR 63 Subpart KK (Printing and Publishing MACT) and 40 CFR 63 Subpart N (Hard Chromium Electroplating MACT).

COMPLIANCE STATUS

The facility is inspected once a year. The most recent full compliance inspection of the facility was conducted on December 18, 2002. DEQ staff conducted a partial compliance inspection, including observation of a stack test on catalytic oxidizer 2, on October 13, 2004. Transprint was found to be operating in compliance during the inspections. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements.

CHANGES SINCE INITIAL PERMIT

A significant modification to the initial Title V permit was made March 13, 2003, to correspond to a throughput increase and other changes made simultaneously to the minor NSR permit. The renewed Title V permit reflects those changes and others that have been made to the facility's minor NSR permits since the modification, including the following:

- Addition of a release ink production process
- Addition of a second chromium electroplating tank
- Removal of state-only enforceable conditions (such conditions are now designated state-only enforceable in the 3/31/03 minor NSR permit and therefore are not required to be included in the Title V permit. The applicant has opted to omit the conditions from its Title V permit.)

Also, requirements from the 2/14/00 Title V permit that have been fulfilled (e.g., capture efficiency testing on the proof printing machines) have been removed in the renewed permit. Additionally, minor changes have been made to the insignificant emissions units table.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
B1	S6	Kewanee Boiler Corporation, December 1976	10.5 MMBtu/hr	-	-	-	
B2	S7	Kewanee Boiler Corporation, December 1976	10.5 MMBtu/hr	-	-	-	
Miscellaneous Printing Operations							
P6	S1, S4	Geo Moulton Successor proof presses (5)	30 meters/hr each	TEC Systems 20500 catalytic afterburner	CD1	VOC, VHAPs	3/31/03
P7	S2	Renzmann parts washers (2)	25.6 lbs solvent/hr (total)	TEC Systems 30000 catalytic afterburner	CD2	VOC, VHAPs	3/31/03
Rotogravure Printing Presses							
P1	S1	Nakajima 6-station rotogravure printing press	7,200 meters/hr	TEC Systems 20500 catalytic afterburner	CD1	VOC, VHAPs	3/31/03
P2	S1	Windmoeller and Holsher 8-station rotogravure printing press	9,600 meters/hr	TEC Systems 20500 catalytic afterburner	CD1	VOC, VHAPs	3/31/03
P3	S2	Andreotti 10-station rotogravure printing press	5,000 meters/hr	TEC Systems 30000 catalytic afterburner	CD2	VOC, VHAPs	3/31/03

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
P4	S2	Windmoeller and Holsher 10-station rotogravure printing press	5,000 meters/hr	TEC Systems 30000 catalytic afterburner	CD2	VOC, VHAPs	3/31/03
P5	S3	10-station rotogravure printing press (not yet constructed-permit valid through 9/15/05)	9,600 meters/hr	catalytic afterburner	CD3	VOC, VHAPs	3/31/03
Release Ink Production							
RI		Release ink production process	one 190-gallon fully-covered mix tank; storage tanks and drums each not exceeding 250 gallons in capacity	-	-	-	3/31/03
Chromium Electroplating							
E42	S8	Acigraf enclosed hard chromium electroplating tank	1000 Ampere-hours/hr	KCH Services, Inc. PVC Spectra U-IV-2 composite mesh pad mist eliminator	CD4	Hexavalent chromium, PM-10	10/20/04
E53	S8	Acigraf enclosed hard chromium electroplating tank	1000 Ampere-hours/hr	KCH Services, Inc. PVC Spectra U-IV-2 composite mesh pad mist eliminator	CD4	Hexavalent chromium, PM-10	10/20/04

* The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

EMISSIONS INVENTORY

A copy of the 2003 annual emission update is attached as Attachment A. Emissions are summarized in the following tables.

2003 Actual Emissions

	Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO_2	PM_{10}	NO_x
Boiler (B1)	0.03	0.43	0.00309	0.04	0.52
Catalytic Incinerators (combustion)	0.17	2.66	0.02	0.24	3.17
Presses 1 - 4 (P1 - P4)	3.61	0	0	0	0
Proof printing (P6)	4.34	0	0	0	0
Parts washers (P7)	0.74	0	0	0	0
Cleaning outside enclosures	7.0	0	0	0	0
Release ink production	0	0	0	0	0
Chromium electroplating	0	0	0	1.57E-08	0
Total	**15.89**	**3.09**	**0.023**	**0.28**	**3.69**

Note: Press No. 5 (P5) has not yet been constructed.

2003 Facility Hazardous Air Pollutant Emissions

Pollutant	Hazardous Air Pollutant Emission in Tons/Year
Methanol	0.14
MIBK	0.22
MEK	6.68
Toluene	4.81
Hexavalent chromium	1.57E-08
TOTAL HAPS	**11.85**

Note: Combustion emissions of naphthalene, arsenic, chromium, cobalt, manganese, nickel, and lead were below one pound per year.

EMISSION UNIT APPLICABLE REQUIREMENTS - Fuel Burning Equipment (B1 and B2)

Limitations

Transprint's two gas-fired boilers are exempt from permitting under 9 VAC 5-80-10 of Virginia Regulations. However, the following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80 and 290, New Source Standard for Visible Emissions

The boiler fuel is limited to natural gas and liquid propane gas to demonstrate compliance with the above visible emission limit as authorized by 9 VAC 5-80-110. The permit also requires operator training for proper operation and maintenance of the boilers.

National Emissions Standards for Hazardous Air Pollutants from Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63 Subpart DDDDD) were promulgated September 14, 2004. Transprint's boilers meet the applicability criteria of the rule; however, because the boilers are existing boilers that use only gaseous fuels, there are no emissions, monitoring, recordkeeping, or testing requirements from Subpart DDDDD that apply to the units.

Monitoring and Recordkeeping

The permittee shall maintain fuel purchase records, which will provide reasonable assurance that only natural gas or propane is used. That in turn will provide reasonable assurance of compliance with the visible emission limit.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

For existing boilers of the size and fuel type of Transprint's, Subpart DDDDD requires that the source provide an initial notification of applicability according to 40 CFR 63.9(b)(2) within 120 days of the rule's effective date. Although published in the Federal Register in September, the rules specifies that its effective date is November 12, 2004. The renewal permit includes the requirement that Transprint provide initial notification by March 12, 2005.

EMISSION UNIT APPLICABLE REUIREMENTS - Miscellaneous Printing Operations (P6 & P7)

Limitations

The following VOC limitations are State BACT requirements from the Minor NSR Permit dated March 31, 2003. Please note that the condition numbers are from the 2003 permit, a copy of which is attached (Attachment B).

> Condition 4, requiring that the proof printing machines (P6) be controlled by a 70% efficient capture system and a catalytic incinerator having a 95% destruction efficiency
>
> Condition 5, requiring that the Renzmann parts washers (P7) be controlled by a 100% efficient capture system and a 95% efficient catalytic incinerator
>
> Condition 9, limiting the throughput of VOC to the proof presses and parts washers, in lbs/hr and tons/year
>
> Condition 11, limiting VOC emissions from the proof presses and parts washers, in lbs/hr and tons/year

The limitation on visible emissions from the catalytic incinerators serving proof printing machines and parts washers is included in Rotogravure Press limitations.

It should be noted that 40 CFR 63 Subpart KK (Printing and Publishing MACT) includes an exception for proof presses at product rotogravure facilities in the definition of affected source under the rule (see 40 CFR 63.821(a)(2)(i)). Accordingly, the proof machines (P6) are not subject to the MACT.

Monitoring

The monitoring requirements for the proof printing presses (P6) and the Renzmann parts washers (P7) in the 3/31/03 Minor NSR permit have been modified to meet Part 70 requirements. Please note that monitoring related to the catalytic incinerators is not addressed in this section but rather under Rotogravure Press monitoring.

The permit requires that compliance with the hourly throughput limits be demonstrated using the following equation:

$$T = \sum_{i=1}^{n} \frac{M_i W_i}{H} \times 2000$$

Where
T = VOC throughput in pounds per hour
M = total mass (tons) of each solvent or ink (i) as applied during the calendar month
W = weight fraction of VOC in each solvent or ink (i), as applied
H = total hours of operation of each press or cleaning operation during the calendar month

Compliance with the annual throughput limits will be demonstrated using the formula below.

$$T = \sum_{i=1}^{n} M_i W_i$$

Where
T = VOC throughput in tons
M = total mass (tons) of each solvent or ink (i) as applied during the calendar month
W = weight fraction of VOC in each solvent or ink (i), as applied

Hourly emissions will be calculated using the following formula:

$$E = \sum_{i=1}^{n} \frac{M_i W_i (1 - OCE)}{H} \times 2000$$

Where
E = VOC emissions in pounds per hour
M = total mass (tons) of each solvent or ink (i) as applied during the calendar month
W = weight fraction of VOC in each solvent or ink (i), as applied
H = total hours of operation of each press or cleaning operation during the calendar month
OCE = overall control efficiency (the product of capture efficiency and control device destruction efficiency)

Compliance with the annual emissions limits will be demonstrated as follows.

$$E = \sum_{i=1}^{n} M_i W_i (1 - OCE)$$

Where
E = VOC emissions in tons
M = total mass (tons) of each solvent or ink (i) as applied during the calendar month
W = weight fraction of VOC in each solvent or ink (i), as applied
OCE = overall control efficiency (the product of capture efficiency and control device destruction efficiency)

In developing monitoring in previous Title V permits, it has been presumed that monitoring required in new standards under Section 112 (NESHAP) after November 15, 1990, is adequate to meet the periodic monitoring requirements of 40 CFR Parts 70 and 71. The NESHAP for the printing industry (40 CFR 63, Subpart KK) allows printers the option of relying on formulation data for volatile matter content, in lieu of reference method testing. Furthermore, in Transprint's case, the likelihood of emission violations is very low. Transprint has historically operated well below (at less than 50% of) its allowable limits. The presses are controlled by catalytic incinerators that are subject to extensive parametric monitoring requirements (see Monitoring for Rotogravure Presses (P1 – P5)). Periodic stack testing of the incinerators is also required. Emissions vary little due to use of controls and of inks having similar VOC content. It is not economically reasonable to perform reference method testing on the inks due to the small likelihood of violation. Instead, the permit requires the VOC content of ink as supplied to be based on certified manufacturer formulation data as shown on the Material Safety Data Sheet (MSDS) or on a VOC Data Sheet for each product. If a range of VOC content values is given, calculations shall be based on the maximum value. Such monitoring of incinerator parameters and VOC throughput will provide a reasonable assurance of compliance with the limits and therefore satisfies the periodic monitoring requirement.

The parts washers (P7) are designed to be permanent total enclosures. Each unit is a rectangular tank (10 ft x 3 ft x 3 ft) containing approximately 100 gallons of solvent. The units have tight-fitting lids. A 2,700 cfm exhaust fan draws air from beneath the lids to collect solvent fumes when the lids are open. The fumes are ducted directly to a catalytic incinerator (CD2) via a 10-inch diameter exhaust duct. The lids are normally closed and are opened only to load or unload parts. When the lid is closed, the unit is completely sealed and there are no solvent emissions. When the lid is opened, the exhaust fan draws all solvent into the incinerator and prevents any emissions from leaving the unit through the top. Accordingly, 100% capture efficiency is assumed.

Recordkeeping

The recordkeeping requirements in Condition 20 of the 3/31/03 Minor NSR Permit have been modified to meet Part 70 requirements. Required records include the hours of operation for and the VOC throughput to the proof printing machines (P6), the parts washers (P7) and press

cleaning, and cleaning outside the enclosures. Additionally, records of emission calculations must be kept. Certified MSDS or VOC Data Sheets showing VOC content (as supplied) must also be maintained. For the proof printing machines, the permit requires that records of Method 204 test results be maintained that document 70% or higher capture efficiency.

Testing

The requirement in Condition 14 of the 3/31/03 Permit that the facility be constructed so as to allow emissions testing upon reasonable notice has been included in the Title V permit. The operating permit further requires that EPA Method 204 testing of capture efficiency for the proof printing machines (P6) be repeated if the process or enclosure is changed such that the capture efficiency may be reduced. There are no other source test requirements for the units. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

As required by Condition 21 of the 3/31/03 Minor NSR Permit, the operating permit requires and provides a schedule for submittal of quarterly reports showing monthly and rolling 12-month VOC throughput to the proof printing machines (P6), parts washers (P7), press cleaning, and cleaning outside the enclosures. Transprint is also required to report the monthly and rolling 12-month VOC (as a combined total for P1 – P7) that is recovered or disposed of off-site.

EMISSION UNIT APPLICABLE REQUIREMENTS - Rotogravure Printing Presses (P1 - P5)

Limitations

The following VOC limitations are State BACT requirements from the Minor NSR Permit dated March 31, 2003. Those limitations applicable to the rotogravure presses (P1 - P5) also meet the requirements of 40 CFR 63 Subpart KK (Printing and Publishing MACT) for product and packaging rotogravure. Please note that the condition numbers are from the 2003 permit, a copy of which is attached (Attachment B).

> Condition 3, stating that VOC emissions from the five rotogravure presses shall be controlled by permanent total enclosure and catalytic incinerators achieving a 95% destruction efficiency
>
> Condition 6, stating that the incinerators shall maintain a minimum combustion zone temperature of 550° F and a minimum retention time of 0.24 seconds and that the temperature before and after the catalyst bed shall be continuously measured

Condition 7, which delineates the criteria for permanent total enclosure

Condition 8, listing natural gas and liquid propane gas as the approved fuels for the incinerators

Condition 9, limiting the throughput of VOC to the presses, in lbs/hr and tons/year

Condition 11, limiting hourly and annual VOC emissions from the presses

Condition 12, limiting visible emissions from the presses to 5 percent opacity

Condition 13, requiring that the presses be operated in accordance with 40 CFR 63 Subpart KK, except where the permit is more restrictive

Condition 15, advising that operation of the four-station Windmoeller and Holsher press, or use of its parts to modify another press, may require a permit

Condition 17, requiring that all temperature monitoring devices be installed and operational prior to performance testing

Additionally, a requirement from 40 CFR 63 Subpart KK to develop a startup, shutdown, and malfunction plan was included in the permit.

40 CFR 63 Subpart KK imposes limits on organic HAP emissions from rotogravure printing while offering a variety of compliance options for doing so. Product rotogravure facilities such as Transprint may comply through use of capture and control equipment, the substitution of non-HAP solvents for HAP, or a combination of these methods. Ten options for demonstrating compliance are delineated in 40 CFR 63.825 for product rotogravure facilities. Transprint has chosen to comply with 40 CFR 63 Subpart KK by use of capture and control equipment, as specified in 40 CFR 63.825(b). Such capture and control requirements are codified in the facility's 3/31/03 permit and have been incorporated in the Title V permit. It should be noted that Transprint may in the future choose to comply with 40 CFR 63 Subpart KK through use of any option given in 40 CFR 63.825 (such a change would require a modification of the minor new source review permit).

Monitoring

The monitoring requirements for the rotogravure presses in the 3/31/03 Minor NSR permit have been modified to meet the requirements of 40 CFR 63 Subpart KK. Such requirements in turn meet Part 70 requirements.

The permit requires Transprint to continuously measure the combustion zone temperature before the catalyst bed in each catalytic incinerator (CD1, CD2, and CD3). Requirements from 40 CFR 63 Subpart KK concerning required accuracy, calibrations, operation and maintenance of

continuous monitoring systems (CMS) have been included. 40 CFR 63 Subpart KK also requires that a quality control program be developed and implemented for the CMS. There are no monitoring requirements related to retention times, because the required incinerator retention time is a design parameter and represents the retention at maximum flow rate (the minimum retention time).

For Press No. 5 (P5), Transprint is required to perform an initial stack test on the incinerator and to confirm that the total enclosure criteria are met using EPA Method 204. A performance test of the temperature and capture monitors will be conducted simultaneously, as required by 40 CFR 63 Subpart A. To verify ongoing performance of all incinerators, the permit requires Transprint to conduct a stack test every five years on each incinerator. Testing conducted on the incinerators serving Presses 1 – 4 (P1 – P4) during the first Title V permit term served to demonstrate initial compliance with 40 CFR 63 Subpart KK.

For each press, the permittee will monitor and record on a monthly basis ink usage, VOC content of the ink, and the number of hours of press operation. Using these data, the permittee will calculate hourly, monthly, and annual VOC throughput and emissions to demonstrate compliance with VOC limitations. Hourly and annual throughput and emissions calculations shall be based on the formulas listed in the Miscellaneous Printing Operations Monitoring section above. Control device destruction efficiency to be used is that required by the permit or that indicated by the most recent stack test. Hourly emissions will be calculated by dividing the monthly emissions by the number of operating hours for the presses for the month.

In developing monitoring for previous Title V permits, it has been presumed that monitoring required in new standards under Section 112 (NESHAP) after November 15, 1990, is adequate to meet the periodic monitoring requirements of 40 CFR Parts 70 and 71. The NESHAP for the printing industry (40 CFR 63, Subpart KK) allows printers the option of relying on formulation data for volatile matter content, in lieu of reference method testing. Furthermore, in Transprint's case, the likelihood of emission violations is very low. Transprint has historically operated well below (at less than 50% of) its allowable limits. The presses are controlled by catalytic incinerators that are subject to extensive parametric monitoring requirements. Periodic stack testing of the incinerators is also required. Emissions vary little due to use of control and of inks having similar VOC content. It is not economically reasonable to perform reference method testing on the inks due to the small likelihood of violation. Instead, the permit requires the VOC content of ink as supplied to be based on certified manufacturer formulation data as shown on the Material Safety Data Sheet (MSDS) or on a VOC Data Sheet for each product. If a range of VOC content values is given, calculations shall be based on the maximum value. Such monitoring of incinerator parameters and VOC throughput will provide a reasonable assurance of compliance with the limits and therefore satisfies the periodic monitoring requirement.

Compliance Assurance Monitoring (CAM) as required by 40 CFR 64 does not apply to emission standards/limitations in National Emissions Standards for Hazardous Air Pollutants (NESHAPs) issued after November 15, 1990. Such NESHAP include 40 CFR 63 Subpart KK. Accordingly,

CAM does not apply to the Subpart KK emission standards for the rotogravure printing presses (P1 – P5).

Transprint is required to inspect each press stack weekly for periodic monitoring of the visible emissions limitation. If any visible emissions are present, a six-minute visible emissions evaluation (VEE) must be performed according to Method 9 (40 CFR Part 60, Appendix A). If during the six minutes any violations of the 5% standard are noted, a one-hour VEE is required to demonstrate compliance with the standard. If such VEE indicates a violation of the standard, the permit requires corrective action be taken.

Recordkeeping

The recordkeeping requirements from Condition 20 of the Minor NSR Permit dated 3/31/03 have been modified to meet Part 70 standards. The operating permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include ink usage in each press, VOC content of inks, incinerator temperature, operating hours, and VOC emissions calculations. Certified MSDS or a VOC Data Sheet showing VOC content must also be kept on site. Additionally, records of all performance test results are also required to be maintained. Such results include stack testing and testing to verify that enclosures meet the permanent total enclosure criteria enumerated in the permit. The recordkeeping requirements are derived from Condition 20 of the 3/31/03 Minor NSR permit and from 40 CFR 63 Subparts KK and A.

Testing

As mandated by Condition 14 of the 3/31/03 Minor NSR Permit, the operating permit requires that the facility be constructed so as to allow for emissions testing and monitoring upon reasonable notice. The permit further requires periodic stack testing on the incinerators using EPA Method 25 or 25A to confirm ongoing compliance (according to Condition 18 of 3/31/03 Permit). Initial performance tests (Method 25 or 25A) are required for the incinerator serving Press No. 5 (P5) (derived from Condition 16 of the 3/31/03 Permit) and will demonstrate initial compliance with 40 CFR 63 Subpart KK. The temperature monitoring system will be simultaneously tested, and the enclosure will be evaluated for compliance with EPA criteria for a permanent total enclosure. The permanent total enclosure continuous monitoring system must be in place prior to stack testing.

A table of test methods has been included in the permit if further testing for compliance purposes is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The permit requires Transprint to notify DEQ upon commencement of construction, startup, and testing of Press No. 5 (P5) (according to Condition 19 of the 3/31/03 Minor NSR Permit). As required by Condition 21 of the 3/31/03 Permit, the Title V permit includes quarterly VOC throughput reporting requirements. Reporting requirements from 40 CFR 63 Subpart KK that have been incorporated into the permit include notification of intent to conduct performance testing, notification of compliance, startup, shutdown and malfunction reports, and excess emissions reports for all rotogravure presses (P1 - P5). Transprint is also required to report the monthly and rolling 12-month VOC (as a combined total for P1 - P7) that is recovered or disposed of off-site.

Streamlined Requirements

Visible emissions limitations in 9 VAC 5-50-80 and –290 (New Source Standard for Visible Emissions) have not been included because the BACT limit of 5% opacity is more stringent than the regulatory limit of 20%. Compliance with the 5% opacity limit assures compliance with the regulatory limit.

EMISSION UNIT APPLICABLE REQUIREMENTS – Release Ink Production (RI)

Limitations

The following VOC limitations are State BACT requirements from the Minor NSR Permit dated March 31, 2003. Please note that the condition numbers are from the 2003 permit, a copy of which is attached (Attachment B).

> Condition 10, restricting VOC processed in release ink production to 1,220 tons per year, calculated monthly as a rolling 12-month total
>
> Condition 11, limiting VOC emissions from release ink production to 7.4 tons per year, calculated monthly as a rolling 12-month total

Monitoring

The monitoring requirements for release ink production in the 3/31/03 Minor NSR permit have been modified to meet the requirements of 40 CFR Part 70.

The permit requires that compliance with the VOC processing limit be demonstrated using the following equation:

$$P = \frac{\sum_{n=1}^{i} G_i r_i x_i}{2000}$$

Where
P = VOC processed during the calendar month (tons)
G_i = number of gallons of each solvent i used for the calendar month
ρ_i = density of each solvent i used
x_i = weight percent VOC in each solvent i

The permit requires that compliance with the VOC emissions limit be shown through use of the equation below:

$$E = \frac{\sum_{n=1}^{i} F_i X_i}{2000}$$

Where
E = VOC emissions (tons)
F_i = VOC emission factor (lb/batch) specific to release ink type (clear, extender, pearl, white, or color)
X_i = number of batches of each release ink type produced for each calendar month

The permit requires the VOC content of each solvent be based on certified manufacturer formulation data as shown on the Material Safety Data Sheet (MSDS) or on a VOC Data Sheet for each product. If a range of VOC content values is given, calculations shall be based on the maximum value. Such monitoring VOC processed and emitted will provide a reasonable assurance of compliance with the limits and therefore satisfies the periodic monitoring requirement.

Recordkeeping

The recordkeeping requirements in Condition 20 of the 3/31/03 Minor NSR Permit have been modified to meet Part 70 requirements. Required records include amount of VOC processed and emitted in release ink production (each in tons). Certified MSDS or VOC Data Sheets showing VOC content of each raw material used in ink production must also be maintained.

Testing

The requirement in Condition 14 of the 3/31/03 Permit that the facility be constructed so as to allow emissions testing upon reasonable notice has been included in the Title V permit. There are no source test requirements for the process. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

EMISSION UNIT APPLICABLE REQUIREMENTS - Hard Chromium Electroplating Tanks (E42 and E53)

Limitations

The following limitations are MACT requirements derived from 40 CFR 63 Subpart N (Hard Chromium Electroplating), as codified in the Minor NSR permit dated 10/20/04. Please note that the condition numbers are from the 2004 permit, a copy of which is attached (Attachment C).

> Condition 3, requiring that hexavalent chromium emissions be controlled by a composite mesh-pad system having continuous differential pressure measurement
>
> Condition 5, specifying work practice standards to be followed
>
> Condition 6, stating that Transprint must develop an operation and maintenance plan to be implemented at startup
>
> Condition 9, limiting total chromium emissions to 0.015 mg/dscm

A BACT limit of 5% visible emissions (Condition 10 of the 10/20/04 Permit) has also been incorporated into the Title V Permit.

Monitoring

The monitoring-related conditions in the 10/20/04 Minor NSR permit meet the requirements of 40 CFR 63 Subpart N. They are as follows (please note that the condition numbers are from the 2004 permit, a copy of which is attached (Attachment C)).

> Conditions 3 and 8, requiring that the differential pressure through the pads in the composite mesh-pad system be continuously measured and recorded once daily.

Because the MACT monitoring requirements are met, the monitoring requirements satisfy Part 70 standards for periodic monitoring.

Compliance Assurance Monitoring (CAM) as required by 40 CFR 64 does apply to emission standards in post-11/15/90 NESHAP (see 40 CFR 64.2(b)(1)(i)). Accordingly, the chromium tanks subject to 40 CFR 63 Subpart N are not subject to CAM. It should be noted that the pre-control emissions of regulated pollutants (chromium and particulate matter) from the tanks are less than major-source levels, which also precludes CAM applicability.

The 5% visible emissions limit in Condition 10 of the 10/20/04 Minor NSR Permit is a BACT limit and is not a requirement of 40 CFR 63 Subpart N. Periodic monitoring for compliance with the opacity standard will be a weekly check of the chromium plating tank stack. If any visible emissions are present, a six-minute VEE must be performed according to Method 9 (40 CFR Part

60, Appendix A). If during the six minutes any violations of the 5% standard are noted, a one-hour VEE is required to demonstrate compliance with the standard. If such VEE indicates a violation of the standard, the permit requires that corrective action be taken.

Recordkeeping

The recordkeeping requirements from Condition 11 of the Minor NSR Permit dated 10/20/04, specifying the records of emission data and operating parameters to be maintained, have been incorporated into the operating permit. Because the recordkeeping requirements are MACT requirements from 40 CFR 63 Subpart N, they meet Part 70 standards.

Testing

As required by 40 CFR 63.7(d) and Condition 4 of the Minor NSR Permit dated 10/20/04, the permit requires that the facility be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time. The permit further requires stack testing of the control device serving the chromium plating tanks within 180 calendar days of startup of the second tank (E53), as required in 40 CFR 63 Subpart N and Condition 7 of the 10/20/04 Permit.

Reporting

Following completion of the performance test, Transprint is required to submit a notification of compliance status report, as specified in 40 CFR 63.347(e) and Condition 14 of the 10/20/04 Permit. Ongoing compliance will be documented in semi-annual summary reports as required by 40 CFR 63.347(g) and Condition 12 of the 10/20/04 Permit. The permit requires Transprint to provide notification of the anticipated performance test date (according to Condition 13 of the 10/20/04 Permit).

Streamlined Requirements

Visible emissions limitations in 9 VAC 5-50-80 and -290 (New Source Standard for Visible Emissions) have not been included because the BACT limit of 5% opacity is more stringent than the regulatory limit of 20%. Compliance with the 5% opacity limit assures compliance with the regulatory limit.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

INAPPLICABLE REQUIREMENTS

Although not identified by the permittee as inapplicable, it should be noted that the following requirements were determined to not apply to Transprint.

9 VAC 5 Chapter 40 Article 31 (Rule 4-31), Emission Standards for Paper and Fabric Coating Application Systems: Rule 4-31 applies only to facilities located in VOC control areas. Transprint is not located in a VOC control area. Additionally, Transprint conducts printing, not coating, operations.

40 CFR 60 Subpart Kb, New Source Performance Standards for Volatile Organic Liquid Storage Vessels: The minimum tank capacity to which 40 CFR 60 Subpart Kb is applicable is 19,812.9 gallons. All storage tanks at the Transprint facility have capacities lower than the threshold.

40 CFR 63 Subpart EEEE (National Emission Standards for HAPs from Organic Liquids Distribution): Storage tank standards apply to tanks containing organic liquids having an annual average true vapor pressure of 4 psia or more; Transprint's tanks store liquids having true vapor pressures below the minimum threshold. Transfer operation standards apply to facilities that transfer organic liquids out of the facility; Transprint does not transfer solvents out of the facility.

40 CFR 63 Subpart HHHHH (National Emission Standards for HAPs from Miscellaneous Coating Manufacturing): Applies to process vessels containing liquids having HAP concentration greater than five percent by weight; Transprint's ink mixing units contain liquids having HAP concentrations below the minimum threshold.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
15	Fulton natural gas boiler for distillation units	9 VAC 5-80-720 C.2.a	n/a	0.19 MMBtu/hr
16	Propane liquid to gas converter	9 VAC 5-80-720 C.2.a	n/a	0.25 MMBtu/hr

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
17	Gluers for transwide product maker	9 VAC 5-80-720 B.2, 5	VOCs, organic HAPs	40 ft/min
18	Rag squeezer	9 VA C 5-80-720 B.2, 5	VOCs, organic HAPs	n/a
19	Varnish mixing tanks (2)	9 VAC 5-80-720 B.2, 5	VOCs, organic HAPs	375 and 150 gal
21	Ink production dispenser	9 VAC 5-80-720 B.2, 5	VOCs, organic HAPs	1,500 gal/day
22	Ink storage tanks (11)	9 VAC 5-80-720 B.2, 5	VOCs, organic HAPs	2 @ 400 gal 9 @ 150 gal
24	Production dispenser filter washer	9 VAC 5-80-720 B.2, 5	VOCs, organic HAPs	55 gal
25	Primary ink preparation area (including GMS)	9 VAC 5-80-720 B.2, 5	VOCs, organic HAPs	n/a
26	Hazardous waste drum filling/storage	9 VAC 5-80-720 B.2, 5	VOCs, organic HAPs	n/a
27	MEK/toluene vertical aboveground storage tank	9 VAC 5-80-720 B.2, 5	VOCs, MEK, toluene	10,000 gal
28	Denatured ethanol vertical aboveground storage tank	9 VAC 5-80-720 B.2	VOCs	10,000 gal
29	Ethyl acetate horizontal aboveground storage tank	9 VAC 5-80-720 B.2, 5	VOCs	5,000 gal
30	n-Propanol horizontal aboveground storage tank	9 VAC 5-80-720 B.2	VOCs	5,000 gal
31	Isopropanol horizontal aboveground storage tank	9 VAC 5-80-720 B.2, 5	VOCs	1,000 gal
32	Propane horizontal aboveground storage tanks (2)	9 VAC 5-80-720 B.2	VOCs	1,000 gal (each)
33	Distilled MEK/toluene aboveground storage tank	9 VAC 5-80-720 B.2, 5	VOCs, MEK, toluene	2,200 gal

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
34	Distilled denatured ethanol aboveground storage tank	9 VAC 5-80-720 B.2	VOCs	2,200 gal
35	Dark MEK/toluene aboveground storage tank	9 VAC 5-80-720 B.2, 5	VOCs, MEK, toluene	2,200 gal
36	Dark denatured ethanol aboveground storage tank	9 VAC 5-80-720 B.2	VOCs	2,200 gal
37	Distillation units for dark solvent (3)	9 VAC 5-80-720 B.2, 5	VOCs, MEK, toluene	1 @ 100 gal 2 @ 55 gal
38	Catalytic incinerator (control device #1) natural gas burners	9 VAC 5-80-720 C.2.a	Criteria pollutants, HAPs	8.9 MMBtu/hr
39	Catalytic incinerator (control device #3) natural gas burners (not yet constructed)	9 VAC 5-80-720 C.2.a	Criteria pollutants, HAPs	4.0 MMBtu/hr
40	Natural gas space heaters (13)	9 VAC 5-80-720 C.2.a	n/a	4 @ 0.460 MMBtu/hr 3 @ 0.500 MMBtu/hr 2 @ 0.397 MMBtu/hr 2 @ 0.050 MMBtu/hr 1 @ 0.730 MMBtu/hr 1 @ 0.030 MMBtu/hr
41	Forklifts (3) – propane operated	9 VAC 5-80-720 A.23	Criteria pollutants, HAPs	N/A
43	Nickel electroplating	9 VAC 5-80-720 B.1	Nickel, PM-10	300 Amp-hrs/hr
44	Chromium deplating	9 VAC 5-80-720 B.1	Chromium III, PM-10	200 Amp-hrs/hr
45	Degreasing (1)	9 VAC 5-80-720B	Negligible	NA
46	Manual degreasing and washing (2)	9 VAC 5-80-720 B.2	VOCs	NA
47	Copper electroplating (3)	9 VAC 5-80-720 B.1	Copper, PM-10	2,000 Amp-hrs/hr (each)
48	Turning and polishing	9 VAC 5-80-720 B.2,5	VOCs, HAPs	NA

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
49	Silver plating and degreasing	9 VAC 5-80-720 B.1	Silver, PM-10	1,500 Amp-hrs/hr
50	Wastewater pretreatment system	9 VAC 5-80-720B	Negligible	10 gal/min
51	Ink Jet Printers (2)	9 VAC 5-80-720 B 2, 5	VOCs, organic HAPs	3.2 meters/hr
52	Ink Jet Printers (8)	9 VAC 5-80-720 B 2, 5	VOCs, organic HAPs	9.6 meters/hr
54	n-Propyl acetate horizontal aboveground storage tank	9 VAC 5-80-720 B.2	VOCs	2,000 gal

[1]The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

Uncontrolled emission calculations for the plating tanks (Emission Unit ID#s 43, 44, 47, and 49) are attached (Attachment D).

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit was placed on public notice in the Harrisonburg Daily News Record on November 13, 2004. The public comment period ended December 13, 2004. EPA's review period for the proposed permit ended December 28, 2004. No comments were received from the public or from EPA.

ATTACHMENTS

A: 2003 annual emissions report
B: Minor NSR permit dated March 31, 2003
C: Minor NSR permit dated October 20, 2004
D: Uncontrolled emissions calculations for plating tanks (as listed in Insignificant Emission Units table)